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ABSTRACT

This report describes an evaluation of the effects of the early and grade 7 immersion programs on the English and French language skills of students at the end of grade 7 in Montreal. Tests of English language skills were administered to early immersion, grade 7 immersion, and English control students. Tests of French language skills were administered to the same groups and to a group of seventh grade native French speakers. A questionnaire designed to measure attitudes towards various ethnolinguistic groups was administered to the three groups of Anglophone students. A language use questionnaire determined students' use of French in and out of school. Results show that: (1) immersion programs are not detrimental to the development of English language skills or to academic achievement of children in such programs; (2) early immersion has a greater impact on the development of French language skills than does seventh grade immersion, but that the latter fostered the development of speaking skills; (3) at the end of the seventh grade, neither the early nor grade 7 immersion programs appear to have had any ameliorative effect on the attitudes of English Canadian students towards French Canadians and European French people; and (4) immersion students use French more outside of the classroom than do control students. (CLK)

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EARLY AND LATE FRENCH IMMERSION: A COMPARISON OF CHILDREN AT GRADE SEVEN[1,2]

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Over the past twelve years the South Shore Protestant Regional School Board (SSPRSB) has developed and implemented a number of innovative educational programs for the teaching of French to English-speaking Canadian children. In the first of these, the so-called "early" French immersion program, "an English-speaking child receives all of his kindergarten and grade 1 instruction in French while attending an English school with English classmates. In grades 2 or 3, English is gradually introduced into the program until at grade 4 on and through grade 6 approximately half of the instruction is in French and half in English" (Bruck, Lambert, & Tucker, 1976).

Although the early immersion program has been very successful in producing a high degree of proficiency in French without detrimental effects on the development of English-language skills or academic achievement (see Lambert & Tucker, 1972), and has served as a model for similar programs across Canada (see Swain, 1972), it was perhaps inevitable that alternative programs would be developed by the SSPRSB to provide intensive training in French for those children who, for whatever reason, had not enrolled in the French immersion program in kindergarten or grade 1.

Two such "late" immersion programs are presently offered by the SSPRSB: a grade 4 immersion program and a grade 7 immersion program.

The grade 4 immersion program, now in its third year of existence, is designed for children who have followed the conventional English-language program with French-as-a-second-language (FSL) instruction from grades 1 through 3. Immersion starts at grade 4, when French is introduced as the sole language of instruction except for one daily class (approximately 35 minutes) of English Language Arts. At grade 5, French immersion is out and English is reintroduced as the language of instruction except for approximately 40 minutes of FSL instruction per day and 50 minutes per day of mathematics instruction given in French. In the first evaluation of this program it was found that the program was effective in fostering French-language skills without retarding the development of English-language skills or interfering with the learning of content subjects (Cziko, 1975). A follow-up study replicated these same general findings and in addition found that, at the end of grade 5, pupils who had been in the grade 4 immersion program still retained their "edge" in French over those pupils who had had no immersion experience, although the early immersion program appeared to have a deeper impact on the development of French-language skills than the grade 4 immersion program (Cziko, Holobow, & Lambert, 1977).

Like the grade 4 immersion program, the grade 7 immersion program is for children who have not had any previous French immersion experience. While this program has been in existence longer than the grade 4 immersion program, attempts to compare the effectiveness of the grade 7 program with the early immersion program have lead to somewhat inconsistent findings. In the first evaluation of the grade 7 immersion program it was found that students at the end of the grade 7 immersion year performed at the same level or better on measures of French-language skills than a group of grade 7 students who had completed the early immersion program (Bruck, Lambert, & Tucker, 1975). However, as the authors pointed out, the students compared in this study were most likely not representative of students in the early and grade 7 immersion programs. A re-evaluation of these two programs the following year with other more representative groups of students found that the early immersion students generally performed better than the grade 7 immersion students on measures of French reading, writing, listening, and speaking skills (Bruck, Lambert, & Tucker, 1976). In addition, the same pattern of findings was reported in a preliminary and follow-up evaluation of a comparable grade 7 immersion program offered by the Protestant School Board of Greater Montreal. Genesee and Chaplin found, in 1975, that their grade 7 immersion group had performed at the same level as an early immersion group on tests of French reading, listening, and speaking skills but a year later when Genesee (1976) studied

follow-up groups of students, the early immersion group surpassed the grade 7 immersion group on all tests of French-language skills.

The present report is another and more recent evaluation of the effects of the early and grade 7 immersion programs on the English and French language skills of students at the end of grade 7. For this purpose, tests of English-language skills were administered to early immersion, grade 7 immersion, and English control students. Tests of French-language skills were administered not only to the two immersion groups but also to the English control students and to a group of seventh grade native French-speaking students, permitting us to assess the French-language skills of pupils in the more traditional FSL program and to better document the effects of the early and grade 7 immersion programs. Finally, a questionnaire designed to measure attitudes toward various ethnolingustic groups was administered to the three groups of Anglophone students in order to investigate the affective consequences of these three different French-language programs, and a "language use" questionnaire was also administered to these same students to provide detailed information on their use of French in and out of school.

METHOD

Subjects

The four groups of students tested are described below.

Grade Seven English Control (7E). This group comprised 18 students who had followed the conventional English-language school curriculum from Kindergarten through grade 7 with approximately 45 minutes per day of French-as-a-second-language (FSL) instruction from grades 1 through 7.

Grade Seven Immersion (7I). These 24 students had participated in the one-year French immersion option at the seventh grade level. In elementary school their basic instruction was in English with approximately 45 minutes per day of FSL instruction from grades 1 through 6. In the seventh grade, approximately 70% of their curriculum was taught in French.

Grade Seven Post Bilingual (7B). These 30 students had been part of the early immersion program from kindergarten through grade 6 (at grades 5 and 6 about 60% of the curriculum was taught via French). At grade 7 they followed a traditional English secondary school program, except that they had the option of taking a content subject in French. Their curriculum included a mandatory French language arts course specially designed for their level of experience in French.

Thus, these students were no longer in an immersion program at the time of testing.

Grade Seven French Control (7F). This group comprised 34 Francophone students who attended a French secondary school in the same neighborhood as the English children. They were also at the grade 7 level.

MATERIALS

A series of group and individual tests were administered, some during the beginning of the school year and others towards the end. These tests were designed to provide information about: (a) Intellectual functioning, (b) English language skills, (c) French language skills, (d) Attitudes towards ethnolinguistic groups.

Intellectual Functioning

The Canadian Lorge Thorndike Intelligence Test was administered to the students of groups 7E, 7I, and 7B. This is a group intelligence test with a verbal (English-language based) and a nonverbal section, standardized on a Canadian population. Raw scores were converted to derived IQ's, taking into account each child's age.

English Language Skills

The following tests of English language skills were administered to students of groups 7I, 7B, and 7E.

The Advanced Form "F" of the Metropolitan Achievement Tests language subtests. These subtests include "Word Knowledge", "Reading Comprehension", "Language", and "Spelling". The "Language" subtest measures skills in English capitalization, punctuation and usage rules. The Metropolitan Achievement Tests are a graded series of tests, in multiple-choice format, standardized on large groups of American children. They allow for comparisons of a particular student or group of students with others of the same age and grade level.

The Canadian Tests of Basic Skills. The four subtests for English Language skills are "Vocabulary", "Reading Comprehension", "Work Study Skills", and "Language", the latter tapping knowledge of English spelling, capitalization, punctuation, and usage rules. The CTBS is similar to the MAT, but it has been standardized on a Canadian population. The composite score (which includes the above-mentioned language subtests plus subtests of mathematics concepts and problem solving) was used as a measure of general academic achievement.

French Language Skills

The following tests of French Language skills were given to groups 7E, 7I, 7B, and 7F, with the exception of French listening OISE test which was not given to groups 7E and 7F and the test of French speaking skills which was not given to the 7F group.

French Reading Comprehension. Two tests were administered to see how well students could read and understand both technical and non-technical material. The Test de Lecture "California", a French adaption of the California Reading Test, was selected to measure reading comprehension of technical material. A subtest called "comprehension et interpretation du texte" was selected from the highest level (cycle inférieur de l'enseignement secondaire) equivalent to Grade 7. It consists of four brief articles followed by a series of multiple-choice questions based on the preceding test. The topics of the four articles are 1) the history of aluminum 2) the fishing industry 3) the history of the telegraph and 4) coats of arms. The students were allowed twenty minutes to complete the test. The score for each pupil was the number of correct responses out of 30.

An article from La Presse, one of Montreal's daily French-language newspapers, was selected to measure reading comprehension of non-technical material. The article concerned Yvon Deschamps, a well-known French-Canadian entertainer. The students were then asked to respond with essay-type short answers to nine questions designed to test their comprehension of the article. They were allowed to reread the article while answering the questions. All test instructions and questions were given in French and the students were allowed 30 minutes to complete the test.

The tests were corrected separately by two Francophone university graduates who later discussed discrepancies and agreed on a final mark. The total possible score was 14.

French Writing Skills. Two tests were administered to measure both productive and receptive aspects of French writing skills. A three-minute film loop entitled "Quick Change" was used to examine the students' productive abilities. This is a short skit in which meaning is conveyed through pantomime. After seeing the film, the students were asked to write a narrative description of it. Their compositions were scored for both form and content. The following measures were used for the form analysis:

1. Number of spelling errors (orthographe d'usage; mayson, il done);
2. Number of spelling errors for verbs. These were grammatical in nature (e.g., Il les a donné vs. donnés); (e.g., Il donnez vs. donnait);
3. Number of other spelling errors of a grammatical nature (e.g., les fille vs. les filles);
4. Number of verb errors (wrong tense, lack of agreement, wrong auxiliary);
5. Number of incorrect sentence structures (e.g., a cause que vs. a cause de); (e.g., la fille jolie vs. la jolie fille);
6. Number of incorrect genders;
7. Number of inappropriate vocabulary terms (a French word is used inappropriately, e.g., depuis vs. pendant; demeurer vs. habiter);

8. Number of Anglicisms (English words translated into French, but which in fact are not French words, e.g., discourager vs. décourager);

9. Number of English words;

10. Total number of errors.

Each of these error types was divided by the total number of words in the composition. Thus, for each of the above categories each student received two scores: a raw score (e.g., total number of errors with gender) and a ratio score (e.g., gender errors/total words in composition). This latter score was used to control for length of composition.

The following measures were used in the content analysis. A list of the 10 most important details of the film was compiled. Each composition was examined to see how many of these 10 basic details were reported. Eighteen minor details were also listed and these, too, were counted.

The number of compositions that had an (a) introduction; (b) conclusions, and (c) title were counted. Finally, we counted the number of students who embellished their compositions by adding narrative that did not take place in the film.

Two French teachers who had seen the film scored each composition separately. They then compared their scores for each student, correcting any existing discrepencies.

A proof reading exercise was given to measure receptive writing skills. Sixteen sentences each of which contained one spelling, placement, verb form and gender error were presented to the students. They were told that the sentences contained errors and they were to find and correct as many as possible.

The sentences were scored in the following way:

1. Number of accurate corrections made;
2. Number of inaccurate corrections made (an incorrect form, e.g., tout les filles, was changed to another incorrect form, touts les filles);
3. Number of errors ignored;
4. Number of correct forms changed which resulted in errors;
5. Number of mistakes acknowledged but not corrected;
6. Number of correct forms changed which resulted in other correct forms.

These were tabulated separately by category (place, verb, gender, spelling). Since there were very few entries for categories 5 and 6, no formal statistical analyses were performed.

French Listening Comprehension. Two tests were administered to measure this ability. The first test of French listening comprehension was developed by the Ontario Institute for Studies in Education (OISE).

The students answered multiple-choice questions based on the story "Le Mystère du Professeur" which was presented by means of a tape recorder. The tape was not a good copy and there was some difficulty in understanding it. The score for each pupil was the number of correct responses out of 20. The students were also asked to listen to a recording of a news broadcast taped from an actual program on Radio-Canada's French-language station. Interspersed with each news item was a set of multiple choise questions designed to reflect the student's comprehension of the news segments which had directly preceded. Each question had three response alternatives, one of which was correct. In all cases the choices were mutually exclusive. The tape was played only once. Thirty-second pauses followed each question to allow students to indicate their responses on the answer sheets. The number of questions answered correctly, out of 13, constituted the score.

French Speaking Skills. Four short job descriptions (like those found in classified ads) were written and shown to each student with the following instructions: "You are to read these ads and select one job for which you would like to apply for summer employment. In a short while, you will be interviewed for this job." These instructions were given in French. Each student was then interviewed individually by a Francophone research assistant. Each student was asked the following questions:

1. Quel emploi as-tu choisi?

2. Quel âge as-tu?

3. Est-ce que tu as déjà fait ce genre de travail? Où? Quand?

   Si non, (a) T'es-tu déjà occupé (e) d'un jeune enfant?

   N'as-tu jamais aidé aux travaux domestiques?

   (b) As-tu déjà coupé le gazon?
   lavé des fenêtres?
   nettoyé le terrain?

   (c) N'as-tu jamais mis la table?
   desservi?

4. Peut-tu me donner le nom de quelques personnes avec qui je pourrais communiquer pour avoir des références?

5. Pourrais-tu commencer à plein temps tout de suite?

   Si oui, Qu'arriverait-il de tes études?

   Si non, Pourquoi pas?

6. Serais-tu prêt (e) a habiter chez ton employeur ou préférerais-tu retourner chez toi tous les soirs?

   Est-ce que ce serait trop loin pour voyager tous les jours?

7. Combien voudrais-tu de jours de congé par semaine?

8. Combien penses-tu devoir gagner par semaine?

9. Peux-tu me donner le numéro de téléphone ou je pourrais t'atteindre. A quelle heur devrais-je t'appeler?

Dites-leur que les offres d'emploi ne sont pas véritables et demandez-leur quels sont leurs projets d'été.

All interviews were recorded. These were then transcribed and scored in two different ways: objective ratings and subjective ratings. The following is a description of the objective measures taken.

1. The number of questions that the student did not understand. This was inferred when the student gave an inappropriate response (e.g., How much do you want to make an hour? $20.00, on further repetition, he said $2.50);

2. The number of questions that the interviewer had to repeat because the student asked him to repeat them or the student did not supply enough information to satisfactorily answer the question;

3. The number of English words the student used in the interview;

4. The number of one word answers that the student gave. This score was expressed as a ratio of the number of questions the interviewer asked the student.

These analyses were performed by Francophone research assistants.

The following is a description of the subjective ratings. Two French Canadian graduates (one male, one female) who had no special knowledge of the project, but were familiar with the educational options available to Quebec Anglophone youngsters, were asked to listen to each interview and to make the following judgments.

1- L'étudiant comprend les questions que l'interviewer lui a posées:

oui, parfaitement	la plupart du temps	quelques	rarement	pas du tout

2- L'etudiant semblait:

très a l'aise				mal a l'aise

3- Quant au numéro de téléphone, est-ce que l'étudiant:

_____ répondait naturellement et vite

_____ semblait hesiter comme s'il devait traduire le numéro (de téléphone) de l'anglais au francais

4- Evaluez la facilité d'expression de l'étudiant:

francais courant				difficulté d'expression en francais

5- Selon vous, est-ce que l'étudiant est:

_____ francophone

_____ anglophone (avec un an d'immersion française)

_____ anglophone (avec plusieurs annees d'immersion française)

Attitudes Toward Selected Ethnolinguistic Groups

This test was devised by Lambert, Tucker, and d'Anglejan (1973) to assess children's reactions to four groups of people:

English Canadians, French Canadians, European French, and myself, using 13 bipolar adjective rating scales. A mark of 7 was assigned to the adjective found to portray a good human quality and marks ranged downwards to 1, which portrayed what was found to be an undesirable quality. The thirteen adjective sets were presented in different orders for each of the four ethnolinguistic groups, and were administered to the children of groups 7I, 7B, and 7EC. All groups rated English Canadians first, then French Canadians, then European French, and finally themselves.

Language Use Questionnaire

Students of groups 7E, 7I, and 7B completed a language use questionnaire so that we could obtain detailed information on their use of French both in and out of school.

Testing Procedure

With the exception of the CTBS and CLT, all tests and questionnaires were administered in June, 1976, by a team of bilingual examiners. The CTBS had been administered to the students of groups 7E, 7I, and 7B in October of 1974 (grade 6), 1973 (grade 5), 1972 (grade 4), and 1971 (grade 3), although only the 1971 and 1974 results are included in this report. The CLT was administered to these same students in October of 1974 (grade 6) and 1971 (grade 3). Both the CTBS and CLT had been administered by school personnel and results were obtained from school records.

In general, the testing conditions of students from groups 7E, 7I, and 7B (who were all housed in the same school) were far from optimal. Since the weather was unusually hot and the students were in the midst of writing final examinations it was not the ideal time for administering our tests and questionnaires. We experienced particularly bad discipline problems with group 7I. The students of group 7F were generally more manageable, except for some discipline problems during the French writing test which was written immediately prior to a final examination.

Statistical Procedures

Separate one-way analyses of variance were performed for all measures of English language skills, academic achievement, and selected items of the Language Use Questionnaire with group as the independent variable. When significant F-ratios were found, the Newman-Keuls procedure was used to test for significant differences between all possible pairs of group means. For measures of intelligence, t-values were computed to compare the performance of groups 7E and 7I combined vs. group 7B.

To investigate group differences in performance on the tests of French language skills, in addition to separate one-way analyses of variance, multiple t-tests were computed comparing the performance of group 7F vs. group 7B, group 7B vs. group 7I and on those tests administered to group 7E as well, group 7I vs. group 7E.

Although these comparisons are not statistically independent, it was thought that these 'a priori' comparisons were the more appropriate tests because we expected on French tests that group 7F would perform best followed in order by groups 7B, 7I and 7E.

To analyze the results of the attitude questionnaire, a three by four analysis variance was carried out for each of the 13 traits, with the groups being rated (i.e., myself, English Canadians, French Canadians, and European French) and the groups making the ratings (i.e., 7E, 7I, and 7B), as the independent variables. In those cases where a significant interaction was found, the differences among all 12 means were tested using the Newman-Keuls procedure.

RESULTS AND DISCUSSION

Intellectual Functioning

The results of the CLT nonverbal and verbal IQ subtests, administered to groups 7E, 7I, and 7B in October, 1971 (grade 3) and October, 1974 (grade 6), are presented in Table 1. The results of groups 7E and 7I were combined in this analysis since at the time of testing group 7I had not yet had any French immersion experience and were at that time part of the English control group.

Students in group 7B scored significantly higher on the CLT non-verbal IQ test administered in October, 1971, (at grade 3)

than the combined 7E-7I group. However, the combined 7E-7I group showed a significantly greater increase in nonverbal IQ between grades 3 and 6 than group 7B. No significant group differences were found on the 1971 or 1974 measures of verbal IQ nor on the 1971-1974 difference scores.

It is difficult to explain the differences in nonverbal IQ between children with and without French immersion experience. One possible explanation is that the nonverbal IQ test administered in 1971 for some reason seriously underestimated the nonverbal IQ of both groups of children, especially so for the 7E-7I group, thereby inflating the 1971-1974 difference scores for both groups, but more so for group 7E-7I. In any case, the most recent IQ data available for these groups (taken in 1974 at grade 6) indicate no significant differences in either verbal or nonverbal IQ and therefore suggest that IQ was not a confounding variable in the comparisons to follow.

General Academic Achievement

The mean CTBS composite scores for the combined group 7E-7I and group 7B are presented in Table 2. No significant group differences were found for either the October, 1971 (grade 3) or October, 1974 (grade 6) administrations of CTBS nor were there significant group differences in the increment in these scores from grade 3 to grade 6.

English Language Skills

Table 3 presents the results of English-language subtests of the CTBS administered to groups 7E, 7I, and 7B in October, 1974 (at grade 6) and the English-language subtests of the MAT given to the same groups of students in June 1976 (at grade 7). No significant groups differences were found on the three CTBS subtests (Vocabulary, Reading, and Language). Significant group differences were found on the Word Knowledge and Reading subtests of the MAT with group 7B performing significantly better than group 7E. No significant group differences were found on the Language and Spelling subtests of the MAT.

As in all previous evaluations of the early and grade 7 immersion programs, we again found no evidence to suggest that either program has in any way been detrimental to the development of English-language skills. In fact, where significant differences did arise, we see the early immersion students performing better than the English control group, not vice versa.

Again, as in all previous evaluations of the early immersion program, we find no evidence to suggest that this program has any detrimental effect on academic achievement.

French Language Skills

Table 4 presents the results of all French-language tests administered to groups 7E, 7I, 7B, and 7F. Significant

group differences were found on both measures of reading comprehension, nine of the 16 measures of writing skills, 13 of the 16 measures of proof reading, both measures of listening comprehension, and nine of the 11 measures of speaking skills. Given the very large differences in the amount of exposure to French each group has had, it is not surprising to find significant group effects on most of the measures of French-language skills. What is interesting, however, is that on all but two measures, group differences were always in the predicted direction, i.e., group 7F better than 7B and/or 7B better than 7I and/or 7I better than 7E. In only two cases did we find a group with less exposure to French performing significantly better than a group with more exposure to French. These step-wise differences, then, appear to represent different approximations to native-like command of the French language.

On one measure of French reading comprehension, the Test de Lecture "California", we find that all three of the predicted group differences are significant, i.e., 7F>7B>7I>7E, while on the "La Presse" test we find 7F>7B>7I=7E, i.e., no significant difference between the English control and grade 7 immersion groups. Taken together, these results suggest that both the early and grade 7 French immersion

programs have had a definite impact on the French reading skills of children in these programs and the longer the immersion experience, the greater the impact. Note, however that group 7B did not do as well as the French controls on either of these two tests.

On the nine measures of French writing form, all but three of the significant group differences were between groups 7F and 7B. Only two significant differences were found between groups 7E and 7I (number of Anglicisms and English words) and one significant difference between groups 7I and 7B (number of gender errors). On the two measures of French writing content, group 7B included significantly more major details than both groups 7I and 7F (this was one of the two exceptions to the predicted order mentioned above) although group 7F included more minor details than group 7B. In addition, relatively more students in groups 7F and 7B incorporated introductions and titles into their compositions compared to groups 7E and 7I. The overall pattern of results on these measures suggests that the three groups of English-speaking students are not as different in their French writing ability as we expected, taking into account the large differences in the amount of French instruction received by these three groups.

On the proof reading test, significant group differences with 7F>7B>7E were found for at least one measure (out of four) for each of placement, verb tense, gender, and spelling. There were, however, no significant differences between groups 7E and 7I on any of the 16 measures of proof reading ability. These results suggest that while the early immersion experience has caused students in this program to become more sensitive to errors of placement, verb tense, gender, and spelling in written French, the grade 7 immersion program has not substantially affected the "error sensitivity" of pupils in this program.

Unfortunately, the results of the two listening comprehension tests do not provide us with information permitting us to make comparisons among groups 7E, 7I, 7B, and 7F. It should be recalled that the tape used for the OISE test, on which the French controls performed better than the three Anglophone groups, was not of high fidelity and was for this reason difficult to understand and the news broadcast test, on which group 7B did better than group 7I, was not administered to groups 7E and 7F.

Finally, there were significant group differences on nine of the 11 measures of French speaking skills. These differences were most pronounced on the three subjective ratings on

which group 7B was consistently rated best, group 7I next best, and group 7E worst (group 7F was not included). The same pattern of differences was found for the number of questions not understood by the students during the French interview. Significant differences between groups 7E and 7I were found for the number of questions the interviewer had to repeat and the number of English words used by the students during the interview. In addition, rater A judged one of the 7E students to be a native Francophone while rater B judged one 7E student, one 7I student, and five 7B students to be native Francophones. However, we believe that these students were able to "fool" the two judges because of the poor quality of the interview recordings which were conducted for the most part in a noisy area of the school and that under normal circumstances these students would not have been taken for native speakers of French.

Attitudes Toward Various Ethnolinguistic Groups

The attitudes of the three Anglophone groups (7E, 7I, and 7B) toward self, English Canadians, French Canadians, and European French are summarized in Table 5. Contrary to expectation, there were no significant differences on any of the ratings of English Canadians, French Canadians, or European French. The only significant difference was on the self

rating where group 7E saw themselves more calm (less emotional) than did groups 7I and 7B. It appears, then, that neither the early nor grade 7 immersion program has had any effect, favorable or unfavorable, on attitudes toward their own ethnolinguistic group or towards French Canadians and European French. It is interesting to note, however, that the three groups of Anglophone students taken as a whole appear to have in general more favorable attitudes toward European French people than French Canadian as measured by their ratings on the "intelligent", "friendly", "kind", and "pleasant" scales (see the evaluative composite, Table 5), although they rate themselves and English Canadians highest of all.

Language Use Questionnaire

The results of selected items of the language use questionnaire administered to groups 7E, 7I, and 7B are summarized in Table 6. Significant group differences were found on eight of the 19 times analyzed. Groups 7I and 7B reported that they spoke French with their parents, friends, and neighbours significantly more often than did group 7E. Students in groups 7I and 7B also reported that they are more likely to start speaking French with a stranger who they think speaks French, more likely to answer in French to a stranger who has addressed them in

French, less likely to answer back in English, and less likely to avoid situations where they must speak French. There were no significant group differences in how often the students reported attending French films, watching French television, or reading French books, newspapers, and magazines in their spare time, although group 7I reported that they spent significantly more time listening to French radio than did group 7B but not significantly more than group 7E.

The overall picture that emerges, then, is that students in either the early or late immersion program make more use of French outside the classroom than do students without immersion experience, although not to the extent that one might expect. For example, only 35% of students in group 7I and 53% of students in group 7B reported that they would always answer in French a person who had addressed them in French and only 9% and 17% of students in groups 7I and 7B respectively reported that they would never answer such a person in English. This is surprising when one considers that these immersion students' functional knowledge of French is such that they could probably use French without much difficulty in just about any social situation. The finding that many of these immersion students would not always attempt to do so suggests that for some reason they do not want to always speak French

with Francophones or that they perhaps do not believe that their French is as good as the English of many Francophones they are likely to encounter. It was also found that the immersion students do not seem to take advantage of the many channels of French language and culture available to them via films, radio, television, and publications. These findings are very similar to those of Bruck et al. (1976).

SUMMARY

The results of this evaluation lead to the following conclusions concerning the effects of the early and grade 7 immersion programs on the English and French language skills, academic achievement, attitudes, and language use of students enrolled in these programs as of the end of grade 7.

1. As in all previous evaluations of the early and grade 7 immersion programs of the SSPRSB (Bruck et al., 1975; Bruck et al., 1976) and the PSBGM (Genesee & Chaplin, 1975; Genesee, 1976) we have found no evidence to suggest that either program has been in any way detrimental to the development of English language skills or academic achievement of children in such programs.

2. The grade 7 immersion program appears to be especially effective in fostering the development of French speaking skills. However, when comparing the performance of

students in the grade 7 immersion program with that of students in the traditional FSL program it appears that the grade 7 immersion program has less of an impact on the development of French reading and writing skills.

3. It was found that the early immersion program has a deeper impact on the development of French language skills of English-speaking students at the end of grade 7 than does the grade 7 immersion program. This difference is apparent on the measures of French reading comprehension, proof reading, and speaking skills. These finding are essentially in agreement with the most recent previous comparisons of these two programs (Bruck et al., 1976; Genesee, 1976) and indicate that the two preliminary investigations of these programs (Bruck et al., 1975; Genesee & Chaplin, 1975) included children who were not representative of students in the early and grade 7 immersion programs.

4. At the end of grade 7, neither the early nor grade 7 immersion program appears to have had any ameliorative effect on the attitudes of English Canadian students toward French Canadians and European French people. Although we have found evidence for such effects at the elementary school level (see Cziko, Holobow, & Lambert, 1977), it may be that these effects wear off as the children become older and move into secondary school.

5. Students who have been in a French immersion program reported more use of French outside of the classroom than children without immersion experience. However, the finding that they do not use French as much as one might expect suggests that for some reason these students either feel inhibited or do not always want to speak French when it would be appropriate to do so. It was also found that the immersion students do not seem to take advantage of the many channels of French language and culture available to them via French films, radio, television, and publications.

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FOOTNOTES

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[2]We wish to thank G.R. Tucker who assisted us in the planning of this investigation.

Table 1

INTELLECTUAL FUNCTIONING

Test	Date	Group[a] 7E+7I (20)	7B (27)	t	df
CLT Nonverbal IQ	October 1971 (Grade 3)	95.0	106.5	2.85**	45
CLT Nonverbal IQ	October 1974 (Grade 6)	117.3	121.1	1.27	45
Difference	1974-1971	22.3	14.6	2.01*	45
CLT Verbal IQ	October 1971 (Grade 3)	100.1	105.4	1.62	45
CLT Verbal IQ	October 1974 (Grade 6)	108.6	108.7	0.05	45
Difference	1974-1971	8.5	3.3	1.72	45

[a] Number in parentheses indicate the number of students in each group.

* $p < .05$ (two-tailed test)

** $p < .01$ (two-tailed test)

Table 2

GENERAL ACADEMIC ACHIEVEMENT

Test	Date	Group[a] 7E+7I (23)	7B (25)	t	df
CTBS Composite	October 1971 (Grade 3)	33.8	34.8	0.52	46
CTBS Composite	October 1974 (Grade 6)	65.4	70.3	2.18*	46
Difference	1974-1971	31.6	35.5	2.25*	46

[a] Numbers in parentheses indicate the number of students in each group.

* $p < .05$ (two-tailed test)

Table 3

ENGLISH LANGUAGE SKILLS

Test	Date	Subtest	Group 7E	7I	7B	F	df
CTBS	October 1974 (Grade 6)	Vocabulary	65.7	71.2	71.3	2.33	2,63
		Reading	63.3	66.9	70.6	2.70	2,64
		Language	63.7	63.9	69.4	2.27	2,65
MAT	June 1976 (Grade 7)	Word knowledge	97.2	101.7	105.6	5.49**	2,67
		Reading	96.1	101.3	105.3	3.18*	2,67
		Language	98.5	98.1	102.8	1.76	2,67
		Spelling	100.6	100.6	107.3	3.35*	2,67

Note: Means connected by a line differ significantly according to the Newman-Keuls procedure ($p < .05$).

* $p < .05$
** $p < .01$

Table 4

FRENCH LANGUAGE SKILLS

	Group					
	7E	7I	7B	7F	F	df
Reading comprehension:						
Test de Lecture "California"	10.44	12.95	17.43	20.68	37.67	3,96
La Presse	1.25	1.09	4.52	6.11	41.94**	3,97
Writing skills: form						
Spelling errors	.49	.37	.43	.31	2.21	3,102
Verb spelling errors	.24	.20	.18	.16	0.58	3,102
Other spelling errors	.35	.24	.26	.10	4.85**	3,102
Verb errors	.13	.16	.13	.06	1.70	3,102
Structure errors	.38	.29	.20	.05	12.57**	3,102
Gender errors	.26	.31	.43	.01	29.28**	3,102
Vocabulary errors	.26	.25	.21	.09	29.28**	3,102
Anglicisms	.09	.19	.11	.04	4.93**	3,102
English words	.28	.15	.12	.02	12.11**	3,102

Table 4 (cont.)

		Group 7E	7I	7B	7F	F	df
Writing skills: content							
Major details		3.65	2.81 —	7.34 —	1.97	43.09**	3,92
Minor details		3.29	2.57	3.38 —	4.93	5.63**	3,92
Introductions:	yes	7	10	21	22	X^2=8.70*	3
	no	10	11	8	7		
Conclusions:	yes	13	17	24	23	X^2=0.29	3
	no	4	4	5	6		
Title:	yes	12	12	27	27	X^2=14.63**	3
	no	5	9	2	2		
Fantasies:	yes	9	12	24	20	X^2= 5.79	3
	no	8	9	5	9		
Proof Reading:							
Placement							
Accurate corrections		0.40	0.60 —	9.31	10.55	79.31**	3,93
Inaccurate corrections		0.40	0.05 —	.34 —	.79	7.93**	3,93
Errors ignored		15.20	15.35 —	6.31	4.64	83.89**	3,93
Correct forms changed		0.27	0.00 —	.24 —	0.00	3.82*	3,93

Table 4 (cont.)

	Group					
	7E	7I	7B	7F	F	df
Verb Tense						
Accurate corrections	1.40	0.75 —	4.69 —	8.64	60.31**	3,93
Inaccurate corrections	3.13	2.95	4.07	3.18	1.79	3,93
Errors ignored	11.27	12.25 —	7.28 —	4.15	38.18**	3,93
Correct forms changed	2.87	2.15	2.62 —	1.21	7.50**	3,93
Gender						
Accurate corrections	0.60	0.40 —	2.79 —	12.24	166.38**	3,93
Inaccurate corrections	0.00	0.00	0.00	0.00	-	3,93
Errors ignored	15.40	15.60 —	13.21 —	3.76	166.38**	3,93
Correct forms changed	0.93	0.80	1.45 —	0.33	4.89**	3,93
Spelling						
Accurate corrections	1.73	1.90 —	7.83 —	11.67	60.78**	3,93
Inaccurate corrections	2.67	2.00	2.48	1.94	1.01	3,93
Errors ignored	16.87	16.65 —	10.69	9.21	6.80**	3,93
Correct forms changed	7.33	5.40 —	3.28 —	1.85	15.04**	3,93
Listening Comprehension:						
OISE test	4.67	5.43	5.71 —	5.88	5.16**	3,92
News broadcast	-	6.91 —	10.57	-	47.59**	1,48

Table 4 (cont.)

	Group 7E	7I	7B	7F	F	df
Speaking Skills: Objective						
Questions not understood	2.36 —	0.65 —	0.11	-	21.90**	2,59
Questions repeated	1.14 —	0.25	0.43	-	5.48**	2,59
English words	2.21 —	0.50	0.07	-	5.20**	2,59
One-word answers ÷ total questions	0.12	0.18	0.14	-	2.43	2,59
Speaking Skills: Subjective						
How well does student understand?	3.04 —	2.08 —	1.18	-	38.48**	2,59
How confident does student sound?	3.07 —	2.53 —	2.13	-	7.45**	2,59
How fluent does student sound?	3.93 —	3.20 —	2.07	-	28.87**	2,59
Student gives telephone number:						
Rater A: quickly	11	11	26	-	X^2=6.64*	2
hesitates	3	8	3	-		
Rater B: quickly	10	16	26	-	X^2=4.21	2
hesitates	4	1	3	-		

Table 4 (cont.)

		Group 7E	7I	7B	7F	F	df
Is student:							
Rater A:	Francophone	1	0	0	-	X^2=50.03**	4
	Anglophone in 7I	13	15	0	-		
	Anglophone in 7B	0	5	29	-		
Rater B:	Francophone	1	1	5	-	X^2=30.34**	4
	Anglophone in 7I	11	10	0	-		
	Anglophone in 7B	1	9	24	-		

Note: Means connected by a line differ significantly ($p < .05$) according to the Newman-Keuls procedure.

Table 5

MEAN ATTITUDE RATINGS

Trait[a]	Myself			English Canadian		
	7E	7I	7B	7E	7I	7B
Intelligent - stupid	6.08	5.73	5.43	4.92	5.35	5.37
Strong - weak	5.00	5.18	4.27	5.25	5.36	5.00
Friendly - unfriendly	6.67	6.36	5.73	5.92	5.14	5.43
Affectionate - unaffectionate	5.92	5.82	5.63	5.17	5.05	4.93
Industrious - lazy	4.08	4.32	4.00	5.25	5.46	4.70
Kind - mean	6.25	6.00	5.20	5.33	5.27	5.17
Happy - sad	6.33	6.32	5.83	6.00	5.59	5.27
Proud - humble	5.33	5.14	4.83	5.25	5.23	4.93
Self-confident - lacks self-confidence	5.08	5.14	4.77	4.77	5.41	4.90
Good-looking - ugly	5.75	4.82	5.10	5.17	5.18	5.10
Pleasant - unpleasant	6.17	5.73	5.43	5.42	5.32	5.13
Calm - emotional	5.83	4.55	4.00	5.00	4.32	4.57
Talkative - nontalkative	5.58	5.18	4.80	5.25	5.59	4.73
Evaluative composite[b]		5.90			5.31	

Table 5 (cont.)

	French Canadians			European French		
	7E	7I	7B	7E	7I	7B
Intelligent - stupid	3.67	3.41	4.03	4.50	4.46	4.03
Strong - weak	4.50	4.23	4.20	5.17	4.64	4.93
Friendly - unfriendly	4.50	3.82	4.00	5.42	5.27	5.50
Affectionate - unaffectionate	3.67	3.82	4.00	4.75	5.14	5.03
Industrious - lazy	3.67	3.64	3.77	4.58	4.27	5.03
Kind - mean	4.17	3.32	3.73	5.08	4.86	5.20
Happy - sad	4.92	4.68	4.50	5.33	5.09	5.57
Proud - humble	5.08	5.00	4.13	5.00	5.41	4.43
Self-confident - lacks self-confidence	3.92	4.36	4.53	4.75	4.41	5.50
Good looking - ugly	3.42	3.82	4.10	4.83	4.73	4.93
Pleasant - unpleasant	3.50	3.73	3.57	5.33	5.09	5.30
Calm - emotional	2.17	2.50	2.97	4.17	3.41	4.40
Talkative - nontalkative	6.50	5.73	5.53	5.50	5.23	5.00
Evaluative composite[b]		3.78			5.00	

Note: Means connected by a line differ significantly ($p < .05$) according to the Newman-Keuls procedure.

[a] The scale ranged from 1 (the negative trait, e.g., "stupid") to 7 (the positive one, e.g., "intelligent").

[b] These entries are the mean ratings averaged across the "intelligent", "kind", and "pleasant" scales and across groups 7E, 7I, and 7B.

Table 6

LANGUAGE USE INFORMATION

	Group 7E	7I	7B	F	df
1. How often do you speak French (ourside of school) in the following situations?					
(a) with parents	1.33	2.45	2.00	7.22**	2,59
(b) with brothers and/or sisters	1.50	1.70	1.86	0.82	2,57
(c) with other relatives	1.33	1.80	2.-0	1.80	2,55
(d) with friends	1.83	2.91	2.59	4.11**	2,61
(e) with neighbours	1.58	3.24	2.90	7.91**	2,60
2. With your French teachers, outside class, how often do you speak French?	2.30	2.86	3.00	0.95	2,59
3. With your schoolmates, outside of school, (away from school property), how often do you speak French?	1.50	2.04	1.63	1.66	2,60

Table 6 (cont.)

	Group 7E	7I	7B	F	df
4. How much opportunity do you think you have, outside of school, to speak French now (on a day-to-day basis)?	2.50	3.04	2.93	0.94	2,62
5. When you meet a stranger who you thinks speaks French as his native language, how often do you actually start talking to him in French?	2.08	3.36	3.23	5.26**	2,61
6. How often do French speaking people actually start speaking in French when they talk to you?	3.25	3.95	3.77	2.68	2,61
7. When a French speaker approaches you and begins talking in French, how likely are you to answer back in French?	2.75	4.04	4.33	13.08**	2,62
8. How likely are you to answer back in English?	3.92	2.87	2.55	8.00**	2,61
9. When you start talking in French to a French speaking person, how often do they switch into English?	2.83	2.32	2.41	1.58	2,60
10. Do you ever avoid situations where you have to speak French?	3.33	2.45	2.45	3.70*	2,60

Table 6 (cont.)

	Group 7E	7I	7B	F	df
11. When you go to the movies, how often do you go to see films which are in:					
(a) French with English sub-titles?	1.00	1.10	1.24	1.22	2,58
(b) French, without any sub-titles?	1.00	1.19	1.27	0.80	2,59
12. At home, when you listen to the radio, how often do you listen to French stations?	1.73	2.18	1.48	4.25*	2,57
13. At home, how often do you watch T.V. in French?	1.50	1.81	2.07	1.74	2,61
14. When you read books, newspapers, or magazines in your spare time, how often do you read them in French?	1.33	1.90	1.67	2.26	2,61

Note: Means connected by a solid line differed significantly according to the Newman-Keuls procedure ($p < .05$).

a Responses were coded as follows: never=1, rarely=2, sometimes=3, often=4, always=5.

b For item no. 4, scores ranged from 1 (none) to 5 (a great deal).

* $p < .05$
** $p < .01$